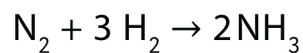


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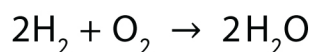
Mole Ratio Worksheet

1. Here is the reaction depicting the formation of NH_3 .



- How many moles of N_2 react with H_2 in this reaction?
- How many moles of NH_3 will be produced if 4.5 moles of H_2 participate in the reaction?
- In order to produce 5 moles of NH_3 , how many moles of N_2 are required?

2. Here is the reaction for the formation of water.



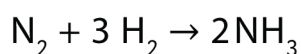
- What is the ratio between H_2 and H_2O in the equation?
- How many moles of H_2O are produced when 20 moles of O_2 participate in this reaction?
- What is the ratio between O_2 and H_2O in the equation?
- How many moles of H_2O are produced when 20 moles of H_2 participate in this reaction?

Name : Date :

Mole Ratio Worksheet

Answers

1. Here is the reaction depicting the formation of NH_3 .



a) How many moles of N_2 react with H_2 in this reaction?

$$\text{Number of moles of } \text{N}_2 = (7.5/3) = 2.5$$

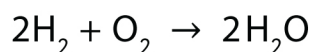
b) How many moles of NH_3 will be produced if 4.5 moles of H_2 participate in the reaction?

$$\text{Number of moles of } \text{NH}_3 = (2/3) \times 4.5 = 3$$

c) In order to produce 5 moles of NH_3 , how many moles of N_2 are required?

$$\text{Number of moles of } \text{N}_2 = (5/2) = 2.5$$

2. Here is the reaction for the formation of water.



a) What is the ratio between H_2 and H_2O in the equation?

$$\text{The ratio between } \text{H}_2 \text{ and } \text{H}_2\text{O} \text{ is } 1:1.$$

b) How many moles of H_2O are produced when 20 moles of O_2 participate in this reaction?

$$\text{Number of moles of } \text{H}_2\text{O} = 20 \times (2/1) = 40$$

c) What is the ratio between O_2 and H_2O in the equation?

$$\text{The ratio between } \text{O}_2 \text{ and } \text{H}_2\text{O} \text{ is } 1:2.$$

d) How many moles of H_2O are produced when 20 moles of H_2 participate in this reaction?

$$\text{Number of moles of } \text{H}_2\text{O} = 20 \times (1/1) = 20$$